

PHYSICS >> Work and Energy

Q 1 Work done by friction force is always

A Negative

B positive

C zero

D maybe positive, maybe negative

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Q 2

The maximum velocity of SHM is a_0 the period of oscillation is

A

$$2\pi x_0/a_0$$

B

$$2\pi a_0/x_0$$

C

$$2\pi a_0 x_0$$

D

$$2\pi/a_0 x_0$$

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Q 3

Electric power is

A

rate of electric work done per unit time

B

voltage per unit time

C

electric charge per unit time

D

current per unit time

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Q 4

The magnetic force is simply a

A

reflecting force

B

deflecting force

C

restoring force

D

gravitational force

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Q 5

Rate of change in displacement is known as:...

A

speed

B

velocity

C

acceleration

D

momentum

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Q 6

If a person is irradiated accidentally by high radiation what immediate effects would be seen?

A

skin burning

B

high blood pressure

C

fever

D

any of these

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Q 7

According to First law of thermodynamics,

A

$$dQ = dW - dU$$

B

$$dQ = dU$$

C

$$dQ = dU + dW$$

D

$$dQ = dW$$

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Q 8

The speed of sound in air is approximately:

A

1500 m/s

B

5000 m/s

C

330 m/s

D

50 m/s

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Q 9

Which is not radioactive?

A

ozone

B

hydrogen

C

sodium

D

all of these

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Q 10

Internal energy is _____ of path

A

independent

B

dependent

C

Highly dependent

D

Not enough information

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Q 11

Resistance of a material always decreases if

A

Temperature of material is decreased

B

Temperature of material is increased

C

Number of free electrons available becomes more

D

None of the above is correct

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Q 12

One proton beam enters in magnetic field of 10^{-4} T normally with specific charge 10^{11} C/kg and velocity of 10^7 m/s. What will be the radius of circle?

A

0.1 m

B

1 m

C

10 m

D

none of these

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Q 13

Choose the wrong statement from the following: For accurate measurements, a potentiometer wire_____

- A must have a uniform cross section
- B must have a high temperature coefficient of resistance
- C high specific resistance
- D homogeneity

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Q 14

Radioactive material decays by simultaneous emission of two particles with respective half-lives 1620 and 810 years. What is the time, in years, after which one-fourth of the material remains?

A 2430 years

B 1080 years

C 3240 years

D 4260 years

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Q 15

A block of mass 60 kg just slides over a horizontal distance of 0.9 m. if the coefficient of friction between their surfaces is 0.15 then work done against friction will be:

A 79.4J

B 97.54J

C 105.25J

D 81J

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Q 16

Michelson showed that the standard metre was equivalent to:

A

1,553 wavelengths of red light

B

1,553 wavelengths of blue light

C

1,553,163.5 wavelengths of red light

D

1,553,163.5 wavelengths of blue light

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Q 17

If two bodies have same temperature the rate of heat transfer between them is

A

infinite

B

zero

C

double the temperature

D

none of these

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Q 18

The cosmic radiations are ____ energetic than gamma rays

A

highly

B

equally

C

less

D

none of these

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Q 19

Which of this is constant in isothermal process?

A

total heat

B

work done

C

Entropy

D

Internal energy

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Q 20

The bridge rectifier is preferred to an ordinary two diode full wave rectifier because

A it needs much smaller transformer for the same output

B no center tap required

C less PIV rating per diode

D All of the above

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Q 21

A gardener move a lawn roller through a distance of 50 m. Applied force is 50 N inclined at 60 degree of direction of motion what will be the work done by the gardener

A 1250 J

B 2500 J

C -1250 J

D -2500 J

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Q 22

The turns ratio of transformer is 10, It means that;

A

$$I_s = 10 I_p$$

B

$$N_s = N_p / 10$$

C

$$N_s = 10 N_p$$

D

$$V_s = V_p / 10$$

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Q 23

In Young's double slit experiment, fringe spacing increases if:

- A red light is used as compared to blue light
- B x-ray is used as compared to blue light
- C violet light is used as compared to blue light
- D ultraviolet light is used as compared to blue light

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Q 24

If we are moving with constant velocity frame then the inertial state is same as

A

rest frame

B

accelerating frame

C

non-inertial frame

D

All of these

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Q 25

Which radiation passes through black body

A

alpha

B

gamma

C

beta

D

white

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Q 26

Existence of photon was confirmed by:

A

Compton

B

De' broglie

C

Einstein

D

Max planck

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Q 27

Electric potential difference can be defined as:...

A

$$\Delta V = \Delta U - q$$

B

$$\Delta V = \Delta U / q$$

C

$$\Delta V = \Delta U + q$$

D

$$\Delta V = \Delta U * q$$

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Q 28

Step down transformer has _____ turns in secondary coil

A

more

B

less

C

equal

D

zero

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Q 29

A motion with increasing velocity can be represented on displacement-time graph by....

A

a horizontal line

B

a curve line with decreasing gradient

C

a straight line with constant gradient

D

a curve line with increasing gradient

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Q 30

The shaft of a motor rotates at a constant angular speed of 360 rev/min . Angle turned through in 1 sec in radian is?

A π B 3π C 6π D 12π

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Q 31

Work done by the centripetal force on a body moving in circle is zero because

A

the body moves parallel to F

B

the body move opposite to F

C

the body move right angle to F

D

centripetal and centrifugal balance each other

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Q 32

Wave nature and particle nature of photon is linked by :

A

Rest mass of photon

B

Wavelength of photon

C

Light speed

D

Momentum of photon

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Q 33

If a half wave rectifier is used to convert 50Hz AC into DC, then the number of pulses present in rectifier voltage is

A 25

B 50

C 100

D 75

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Q 34

The units of angular velocity are similar to

A

angular displacement

B

angular acceleration

C

angular frequency

D

none of these

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Q 35

The units of Wien's constant is ____

A

 m.k

B

 m/k

C

 k/m

D

none of these

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Q 36

For a parallel plate capacitor, the energy density is:.....

A

$\frac{1}{2} \epsilon \epsilon_0 E$

B

$\frac{1}{2} \epsilon \epsilon_0 E^2$

C

$\epsilon \epsilon_0 E$

D

$\epsilon \epsilon_0 E^2$

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Q 37

Polarization explains light is

A

electric in nature

B

magnetic in nature

C

both a & B

D

none of these

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Q 38

Peak voltage in the output of half wave rectifier is 10V so dc component of output voltage is

A

$10\sqrt{2}$

B

$10/\sqrt{2}$

C

$10/\pi$

D

10π

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Q 39

When the nucleus of an unstable atom emits only gamma radiation, the nucleus must

A

gain energy

B

lose energy

C

lose protons

D

gain protons

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Q 40

EMF stands for

A

Electromotive force

B

Electrical momentum force

C

Electric Magnetic force

D

None of them

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Q 41

Work done in a isobaric process is given by

A

 PdT

B

 PdV

C

 VdP

D

 P^2dV

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Q 42

A monochromatic light is incident on two slits and interference pattern is produced on screen at the distance L . Now one slit is covered, no light coming from it. What is the change in pattern on the screen?

- A the width of central maximum is decreased
- B the width of outer maximum is decreased
- C the intensity of central maximum will increase
- D less number of fringes will be observed

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Q 43

A radioactive decay rate of 3.7×10^{10} disintegrations per second defines the unit of measurement known as the

A

Curie

B

rutherford

C

rontgen

D

Rad

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Q 44

Find the magnetic flux through a 1000 turn solenoid of radius 10 cm and length equal to 30 cm and a current 3 A pass through it

A $0.4 \times 10^{-3} \text{ Wb}$

B 4000 Wb

C 0.4 Wb

D 4 Wb

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Q 45

A first harmonic stationary sound wave is produced in the air of the cylinder, which is half filled with water. More water is added to the cylinder, now first harmonic stationary wave is produced with a different frequency. What is the change in frequency and the nature of displacement in air at the water surface?

- A nature of displacement = antinode change in frequency = decrease
- B nature of displacement = antinode change in frequency = increase
- C nature of displacement = node change in frequency = increase
- D nature of displacement = node change in frequency = decrease

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Q 46

An ideal gas of N molecules are enclosed in a container at a constant pressure p . The graph between volume of gas and its absolute temperature is a straight line. What is the gradient of the graph?

A $\frac{NR}{p}$

B $\frac{NR}{p}$

C $\frac{Nk}{p}$

D $Nk p$

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Q 47

If two particles collide with one anti particle the resultant will give

A one particle, one anti particle

B total annihilation

C one antiparticle only

D none of these

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Q 48

A real transformer does not change

A

voltage level

B

current level

C

power level

D

frequency level

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Q 49

A galvanometer acting as a voltmeter will have a coil with

A a high resistance in parallel

B a high resistance in series

C a low resistance in parallel

D a low resistance in series

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Q 50

4000 Coulomb charges were passing from the wire for about 12 seconds. Estimate the current during this process?

A 333.3 ampere

B 333.33 volts

C 666.67 ampere

D None of them

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Q 51

The ratio of mass of electron to neutron is

A

1

B

1200

C

1300

D

none of these

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Q 52

A block of mass 50 kg slide over a horizontal distance of 1 m , if the coefficient between the surfaces is 0.2 then work done against friction is

A 98 J

B 72 J

C 56 J

D 34 J

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Q 53

If the velocity of particle is varying linearly with time then shape of d-t curve would be

A

linear

B

quadratic

C

cubic

D

decreasing linearly

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Q 54

The angular speed for the daily rotation of Earth in rad s^{-1} is?

A

2π

B

π

C

4π

D

$7.3 \times 10^{-5} \text{ rad s}^{-1}$

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Q 55

For a half-wave rectifier having diode voltage V_D and supply input of V , the diode conducts for $\pi - 2\theta$, where θ is given by

A $\tan^{-1}(V_D/V)$

B $\sin^{-1}(V_D/V)$

C $\cos^{-1}(V_D/V)$

D $\cot^{-1}(V_D/V)$

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Q 56

Negative of potential gradient is equal to:...

A

electricity intensity

B

electric flux

C

magnetic intensity

D

magnetic flux

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Q 57

In addition to active site, allosteric enzymes contain?

A inhibitors

B substrate

C allosteric site

D polypeptide chains

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Q 58

The lock and key model of enzyme action was proposed by:

A

Louis Pasteur

B

Emil Fischer

C

Daniel Koshland

D

Urey Miller

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Q 59

Smooth muscles, cardiac muscles and organs are regulated by which of the following?

A

Central nervous system

B

Parasympathetic nervous system

C

Sympathetic nervous system

D

Autonomic system

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Q 60

The outermost layer in a typical plant cell would be _____.

A

Primary cell wall

B

Secondary cell wall

C

Middle lamellae

D

Cell surface membrane

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Q 61

Cellular organelles that interact with hydrogen peroxide are called?

A

Glyoxysomes

B

Lysosomes

C

Ribosomes

D

Peroxisomes

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Q 62

The first group of invertebrates to have a closed circulatory system:

A

Nematodes

B

Platyhelminthes

C

Echinodermata

D

None of the above.

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Q 63

Spinal cord is the part of the:

A Peripheral nervous system

B Central nervous system

C Autonomic nervous system

D None of these

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Q 64

First Actions spectrum was obtained by using?

A

Algae

B

Fungi

C

Bacteria

D

Spirogyra

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Q 65

The function of lymph node is to filter ----

A

Blood

B

Lymph

C

Semen

D

Amniotic fluid

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Q 66

ABO blood group system was discovered in:

A

1811

B

1801

C

1911

D

1901

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Q 67

Mumps and Measles are caused by which virus?

A

adenovirus

B

Pox virus

C

influenza Virus

D

paramyxoviruses

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Q 68

In parthenocarpy which levels are high in ovaries?

A

gibberellins

B

cytokinins

C

auxins

D

all of these

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Q 69

Population growth is checked by which of the following?

A no competition

B no polymorphism

C polymorphism

D competition

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Q 70

Which of the following has a chain-like arrangement?

A

Streptobacillus

B

Streptococci

C

both a and b

D

none of these

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Q 71

The pleural membranes cover which organ?

A

Kidney

B

Heart

C

Brain

D

Lungs

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Q 72

Gum swells up in the water because of:

A Plasmolysis

B Imbibitions

C Turgidity

D Endosmosis

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Q 73

The mobility of integral proteins can be measured by physical state of which of the following?

A

amino acids

B

external phospholipids

C

membrane phospholipids

D

membrane appendages

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Q 74

A group of interbreeding individuals belonging to a particular species and sharing a common geographic area is called?

A community

B family

C race

D population

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Q 75

Humans regulate their internal body temperature within a very narrow range. This is an example of?

A homeostasis

B evolution

C genetics

D metabolism

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Q 76

Study of fossils is called

A

mammalogy

B

palaeontology

C

herpetology

D

ornithology

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Q 77

Which tissue attaches the embryo to the wall of uterus?

A

Graafian follicle

B

Corpus luteum

C

Placenta

D

None of these

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Q 78

Fluid secreted by sertoli cells provides sperms with which of the following?

A liquid medium

B protection

C nourishment

D all of these

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Q 79

Which of the following scientists developed the vaccine for anthrax?

A

Edward Jenner

B

Leeuwenhoek

C

Alexander Fleming

D

Louis Pasteur

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Q 80

The number of models that represent enzyme-substrate model is?

A

1

B

2

C

3

D

4

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Q 81

Animal cells are interconnected by which of the following?

A

plasma membrane

B

cell wall

C

desmosomes

D

plasmodesmata

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Q 82

What do the two peaks in the action spectrum represent?

A

absorption of light

B

carbon dioxide consumption

C

emission of light

D

both a and b

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Q 83

The phage that causes the lytic cycle is called?

A

virulent phage

B

lytic phage

C

temperate phage

D

both a and b

82

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Q 84

When a muscle fibre shortens, the following also shortens:

A

actin filament

B

Sarcomere

C

Both A and B are correct

D

myosin

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Q 85

Where does the detoxification of harmful drugs occur?

A

RER

B

SER

C

Golgi

D

both a and b

84

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Q 86

Dark bands of skeletal muscles are:

A

Z-band

B

A band

C

I band

D

H zone

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Q 87

Out of 31 pairs of spinal nerves, how many pairs of thoracic nerves are there?

A

8

B

10

C

12

D

15

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Q 88

Glycogen is how glucose is stored in the human body. Where is it most abundantly found?

A

Liver

B

Muscles

C

kidneys

D

both a and b

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Q 89

Reptiles are different from amphibians because:

A They do not have an amniotic sac in their lungs.

B They breathe through their lungs only.

C They are cold-blooded.

D They have a four-chambered heart.

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Q 90

If all members of a population are homozygous for the same allele, that allele is said to be?

A

Mobile in gene pool

B

Random in gene pool

C

Stationary in gene pool

D

Fixed in gene pool

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Q 91

Inner membrane convolutions of the mitochondria is called?

A

grana

B

intergrana

C

thylakoid membrane

D

cristae

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Q 92

What enzyme is found in the thylakoid membrane that facilitates chemiosmosis?

A

ATP ligase

B

ATP kinase

C

ATP synthase

D

ATP dehydrogenase

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Q 93

Sensory areas that receive impulses from the skin are contained by which of the following?

A frontal lobe

B parietal lobe

C occipital lobe

D temporal lobe

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Q 94

During inspiration, the diaphragm:

A contracts

B relaxes

C contracts and relaxes

D None of these

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Q 95

Mild wheezing, Fever, chills, and shortness of breath; all are symptoms of

A

emphysema

B

asthma

C

pneumonia

D

bronchitis

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Q 96

When HIV becomes AIDS?

A

when it attacks the T cells

B

when it replicates at maximum level

C

when it destroys the body cells

D

all of these

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Q 97

Which of the following does NOT occur during skeletal muscle contraction:

A

ATP is hydrolyzed

B

Calcium binds to myosin heads

C

Both A and B

D

None of these

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Q 98

A botanist sees that when he breeds a plants with blue flowers with a plant with red flowers, the resulting generation are plants that all have a 1 : 1 ratio of blue : red flowers. He knows that the two parents are homozygous for the trait of color. What phenomenon most likely explains the 1 : 1 ratio in the filial generation?

- A Incomplete dominance
- B Independent assortment
- C Penetrance
- D Codominance

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Q 99

Which type of reflex arc affects muscles?

A

autonomic reflex arc

B

somatic reflex arc

C

Both A and B

D

None of these

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Q 100

Excessive increase in temperature of medium causes the enzyme molecule to have which of the following changes?

A activate

B unaffected

C denature

D all of these

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Q 101

The cells that secrete testosterone

A Nerve cells

B fat cells

C muscle cells

D interstitial cells

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Q 102

Which of the following organisms have the greatest problem with photorespiration?

A C4 plants

B heterotrophs

C C3 plants

D CAM plants

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Q 103

White matter is primarily composed of:

A

axons

B

synapse

C

neuron somas

D

None of these

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Q 104

What type of viruses are the polioviruses?

A

DNA enveloped virus

B

RNA enveloped virus

C

dna naked virus

D

rna naked virus

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Q 105

Which lytic enzyme released by the sperm?

A

trypsin

B

helicase

C

testosterone

D

Hyaluronidase

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Q 106

In the nucleus the ssDNA virus genome is converted to dsDNA by _____

A DNA polymerase

B RNA polymerase

C Cell enzymes

D viral proteins

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Q 107

Recombination frequency between two linked genes can be calculated by which of the following?

A test cross

B normal cross

C f1 cross

D back cross

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Q 108

The scrotum is responsible for which of the following in the male reproductive system?

A

Synthesis of sperm

B

Lubrication

C

Nourishment of sperm

D

Temperature regulation

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Q 109

All of the following are inflammatory arthritis except:

A

Rheumatoid Arthritis

B

Osteoarthritis

C

Gouty arthritis

D

Osteomyelitis

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Q 110

A difference between eukaryotic and prokaryotic cells is in having which of the following?

A ribosomes

B cell wall

C nuclear membrane

D all of these

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Q 111

In mammals, which type of phenotypic expression will show recessive traits more frequently in males than females?

A Incomplete dominance

B Complete dominance

C codominance

D X-linked

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Q 112

Which one the following fatty acid is more soluble in an organic solvent and has higher melting point?

A acetic acid

B oleic acid

C palmitic acid

D all of these

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Q 113

What would be the resolving power of the objective length in a microscope if the eyepiece is 10X and total magnification is 40X?

A 4

B 10

C 40

D 400

112

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Q 114

Periplaneta belongs to which phylum?

A

Mollusca

B

Annelida

C

Echinodermata

D

Arthropoda

113

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Q 115

During lytic cycle how many phages are released from infected host cell?

A

100-300

B

100-500

C

100-200

D

100-400

114

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Q 116

Fertilization of human egg occurs in:

A

ovary

B

uterus

C

oviduct (fallopian tube)

D

cervix

115

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Q 117

Which brain part is responsible for our basic and primitive emotions?

A Limbic system

B Thalamus

C hypothalamus

D cerebrum

116

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Q 118

A researcher has designed a new type of inhibitor that binds at the active site of an enzyme. What type of inhibition does this molecule display?

A Uncompetitive inhibition

B Noncompetitive inhibition

C Competitive inhibition

D all of these

117

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Q 119

Phosphofructokinases enzyme converts fructose-6-phosphate into____

A fructose-1,4-phosphate

B fructose-1,6-bisphosphate

C bisphosphate

D fructose

118

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Q 120

Each Kreb's cycle forms how many molecules of NADH?

A 3

B 2

C 4

D 1

119

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Q 121

Who proposed starch sugar hypothesis?

A

Sager

B

Dixon

C

Mohi

D

Drebs

120

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Q 122

The process that does not occur during expiration is:

A intercostal muscles are relaxed

B ribs are relaxed

C muscles of diaphragm are relaxed

D Lungs are relaxed

121

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Q 123

The phage components begin to assemble into mature phages only after the synthesis of?

A structural protein

B nucleic acid

C both a and b

D amino acids

122

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Q 124

The end product of an enzymatic reaction inhibits formation of product in an earlier step. This type of enzymatic regulation is known as ?

A

allosteric regulation

B

negative regulation

C

metabolic pathway loop

D

feedback inhibition

123

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Q 125

Which of the following properties does not belong to Gases?

A

Indefinite volume

B

Indefinite shape

C

Low density

D

Strong interactions

124

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Q 126

The temperature at which vapor pressure of a liquid becomes equal to external pressure or atmospheric pressure is called as ?

A Melting point

B Boiling point

C Freezing point

D Sublimation point

125

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Q 127

Which of the following element can form interstitial alloy with transition elements?

A Zn

B Mg

C H

D All of these

126

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Q 128

In Ion Electron Method of Balancing, equations are

A Written with Oxidation numbers of Constituents

B Split into two half reactions

C only oxidation part is written

D Only Reducing part is written

127

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Q 129

How many pi bonds are present in ethene?

A 3

B 2

C 1

D 0

128

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Q 130

In secondary alkyl halides how many H atoms are attached to Carbon atom which is attached with halogen?

A 2

B 1

C 3

D 4

129

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Q 131

Empirical formula and molecular formula of covalent molecule is

A different

B same

C variable

D equal

130

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Q 132

In the rate equation $R=k[A]^a[B]^b$, a and b as exponents decides

A

Direction of reaction

B

Extent of Reaction

C

Order of Reaction

D

Temperature of Reaction

132

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Q 133

A _ bond may be polar or nonpolar

A

ionic bond

B

covalent bond

C

metallic bond

D

co-ordinate bond

132

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Q 134

SN₁ reactions are favored by which of the following reactions?

A

Water

B

Benzene

C

Carbon Tetrachloride

D

Carbon disulphide

133

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Q 135

Ethanol is used as

A

a drink

B

a fuel

C

a preservative

D

all of above

134

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Q 136

$\text{S}_{\text{N}}1$ reactions have which of the following species formed and consumed in the reaction?

A Transition state

B Intermediate

C Carbanion

D Carbene

135

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Q 137

Which of the following conditions must be possessed by a compound to have geometrical isomerism?

A

Double bond

B

Different groups attach to same carbon of double bond and a double bond

C

Terminal double bond

D

Same groups attach to carbon atom of double bond

136

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Q 138

If two substituents are present at 1,4 positions then the isomer is called as_____?

A

Ortho

B

Meta

C

Para

D

None of these

137

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Q 139

The half-life of Uranium is

A

700 Million years

B

706 Million years

C

89 days

D

710 million year

138

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Q 140

During benedict's solution test Brick red precipitates are formed due to formation of _____?

A

CuO

B

RCOONa

C

Cu_2O

D

$\text{Cu}(\text{OH})_2$

139

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Q 141

$\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ is an example of crystal system

A triclinic

B tetragonal

C cubic

D rhombohedral

140

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Q 142

The existence of matter in our surrounding in different states is due to the difference of

A repulsive force

B interacting force

C creative force

D none of these

141

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Q 143

On heating egg albumin_____?

A Solubilize

B Decompose

C Over cook

D Coagulate

142

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Q 144

Which of the following forces are developed only for few moments ?

A Dipole dipole forces

B Debye forces

C London dispersion forces

D H-bonding

143

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Q 145

Ionic Salts of Group 1 elements can conduct Electricity when they are in ____?

A Solid form

B Molten form

C Aqueous form

D Both b and c

144

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Q 146

The correct electronic configuration of Cr is

A [Ar]4s²3d⁴

B [Ar] 4s²3d⁴

C [Ar]4s 3d⁵

D [Ar]4s¹3d⁵

145

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Q 147

Which of the following method is used to prepare alcohols from alkenes?

A

Reaction of alkenes with X_2 /water

B

Reaction of alkene with water

C

Reaction of alkene with H_2SO_4 /water

D

Reaction of alkene with Ni

146

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Q 148

Homocyclic compounds are also called as_____?

A Heterocyclic compounds

B Alicyclic Compounds

C Aliphatic compounds

D Carbocyclic compounds

147

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Q 149

In a voltaic cell ,two half cells actually separates

A

Two electrolytes

B

Anode and Cathode

C

Oxidation Half cell and Reduction half Cell

D

All of these

148

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Q 150

When an atom shares more than one electrons, the bond formed is

A single bond

B double bond

C triple bond

D both B & C

149

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Q 151

K_c and K_p have the same value when reactants and products have same number of

A

Atoms

B

Molecules

C

Ions

D

Moles

150

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Q 152

Which inert gas is mixed with oxygen gas by deep sea divers to adjust the partial pressure of oxygen gas

A

Neon

B

Helium

C

Argon

D

Krypton

151

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Q 153

In which of the following body part protein is not present ?

A Skin

B Hair

C Nails

D Bones

152

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Q 154

In Lucas test, tertiary alcohols form oily layer of alkyl halide _____?

A

On heating

B

Immediately

C

After 5-10 minutes

D

After 20 minutes

153

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Q 155

Which of the following is most soluble in water ?

A Ethanoic acid

B Pentanoic acid

C Hexanoic acid

D Butanoic acid

154

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Q 156

Which one of the following is a strong electrophile on which benzene electrons attack fastly?

A

FeBr_3

B

FeCl_4^-

C

Cl^+

D

Cl^-

155

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Q 157

The species which donate two electron pairs in a coordination compound is called

A

Ligand

B

Monodentate ligand

C

Polydentate ligand

D

Bidentate ligand

156

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Q 158

The decrease in atomic radii is very prominent in

A second group

B second period

C higher groups

D higher periods

157

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Q 160

Nitrogen N_2 has ____ number of electrons, protons and neutrons

A 7,8,9

B 7,7,7

C 14,14,14

D 14,14,15

159

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Q 161

Glucose is converted into ethanol by the _____ enzyme present in yeast.

A

Invertase

B

Urease

C

Glycolysis

D

Zymase

160

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Q 162

Greater the mass of gas taken, greater will be slope of straight line. Because greater the _____ greater will be volume occupied

A pressure

B temperature

C number of moles

D all of these

161

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Q 163

What is the value of C-C bond length in benzene?

A

154 pm

B

120 pm

C

134 pm

D

139 pm

162

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Q 164

Change in Pressure will only affect the substances which are in

A Liquid state

B Solid State

C Plasma state

D Gaseous State

163

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Q 165

The second ionization energy value of magnesium ion after the removal of second electron is

A 135 KJ/mol

B 145 KJ/mol

C 155 KJ/mol

D 773 KJ/mol

164

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Q 166

During the nomenclature of Alkyl halides, halogens are named as_____?

A

Substituents

B

Parent name

C

Ligand

D

Longest chain

165

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Q 167

What is the correct equation to find Heat of neutralization using glass calorimeter ?

A $q = m s \Delta T$

B $E = q m \Delta T$

C $E = m s \Delta T$

D $q = m c \Delta T$

166

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Q 168

Number of Electrons added on both sides of oxidation and reduction half reactions are balanced

A

At the start of procedure

B

Somewhere in the middle of balancing

C

After Adding two Half reactions

D

Before Adding two Half Reactions

167

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Q 169

Hydrolysis of Tertiary Butyl bromide gives

A

Carboxylic Acid

B

Alcohol

C

Aldehyde

D

Ketone

168

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Q 170

_____conducts nerve impulse in brain

A serotonin

B aspartame

C ascorbic acid

D hydrazine

169

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Q 171

Diamond is a bad conductor because of

A high density

B no free electron

C tight structure

D transparent to light

170

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Q 172

Those elements in which d or f orbitals are in the process of completion are called

A

Transition elements

B

Typical transition elements

C

Outer transition elements

D

Inner transition elements

171

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Q 173

Formation of Grignard reagent from alkyl halide and Mg metal takes place in_____?

A

Water

B

Alcohol

C

Anhydrous ether

D

Carbon tetrachloride

172

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Q 174

During oxidation of unsymmetrical ketones which atom is oxidized?

A

Carbonyl carbon

B

Carbon attach to smaller number of hydrogen atom

C

Carbon attach to larger number of Hydrogen atoms

D

Hydrogen

173

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Q 175

Dehydrogenase is example of which class of enzyme.

A

Oxidoreductase

B

Hydrolases

C

Ligases

D

Transferases

174

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Q 176

Quantum number values for 2p orbitals are

A $n = 2, l = 1$

B $n = 1, l = 2$

C $n = 1, l =$

D $n = 2, l =$

175

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Q 177

Dalton's law of partial pressure is used to derive the relation between K_c and

A Temperature

B Universal Gas constant

C Δn

D K_p

176

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Q 178

At Mount Everest what would be the boiling point of water?

A 100°C

B 69°C

C 98°C

D 102°C

177

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Q 179

Which organic compound will form yellow crystals during iodoform test

A

phenols

B

acetone

C

ethanol

D

methanol

178

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Q 180

The two pi bonds in ethyne molecule are:

- A Parallel to the sigma bond
- B At 19.5° to the sigma bond
- C At 45° to the sigma bond
- D Perpendicular to the sigma bond

179

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Q 181

The elephant is _____ of the biggest land mammals.

A amongst

B single

C lone

D one

180

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Q 182

I borrowed ____ pencil from your pile of pencils and pens.

A a

B an

C the

D no article

181

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Q 183

Choose the correct sentence.

A

Samar bought an apple, an orange and an pear.

B

Samar bought an apple a orange and a pear.

C

Samar bought an apple, an orange and a pear.

D

Samar bought a apple, an orange and a pear.

182

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Q 184

When the dentist came in (A), my tooth was stopped aching (B)/ out of fear (C) that I might loose my tooth. (D)

A When the dentist came in

B my tooth was stopped aching

C out of fear

D that i might loose my tooth.

183

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Q 185

What is your name?

A

Declarative

B

Imperative

C

Interrogative

D

Exclamatory

184

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Q 186

Tweezers ____ always useful to handle small objects.

A is

B are

C will

D may

185

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Q 187

Please give me ____ cake that is on the counter.

A

a

B

an

C

the

D

no article

186

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Q 188

Most of the milk _____ gone bad. Six gallons of milk _____ still in the refrigerator.

A has... are

B have.. is

C has.. is

D have ... are

187

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Q 189

yearned

A

wished

B

dreamed

C

spurned

D

rejected

188

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Q 190

Cats and dogs _____ not get along.

A does

B do

C did

D are

189

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Q 191

The strong earthquake _____ (shake) the city causing lots of damage.

A

shake

B

shook

C

shaking

D

will shake

190

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Q 192

binnial

A

plant that blooms twice a year

B

occurring twice a year

C

composed or created by two people

D

occurring once every two years

191

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Q 193

Choose the correct sentence.

A I completed the homework for English, History, Math and Science only in the span of an hour.

B I completed the homework for English History, Math, and Science only in the span of an hour!

C I completed the homework for english, history, math, and science only in the span of an hour.

D I completed the homework for English History Math and Science only in the span of an hour.

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Q 194

Choose the correct spelling of the word

A developement

B devalopment

C davalopment

D development

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Q 195

The students cleaned up after they finished the experiment.

A complex

B simple

C compound

D None

194

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Q 196

I advised her _____ drink it.

A

don't

B

not to

C

to not

D

to don't

195

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Q 197

Choose the correct spelling of the word

A anniversary

B anniversery

C anniversary

D aniversry

196

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Q 198

_____ man is mortal.

A

A

B

An

C

The

D

No article

197

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Q 199

Choose the present indefinite tense form of the sentence. "He had been sleeping."

A He has been sleeping.

B He had slept.

C He has slept.

D He sleeps.

198

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Q 200

There ____ many difficulties regarding the situation.

A should

B was

C were

D is

199

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Q 201

Fact 1: Most stuff toys are stuffed with beans
Fact 2: There are stuffed bears and stuffed tigers
Fact 3: Some chairs are stuffed with beans
If the above three statements are facts then which of the following statement will also be a fact
I. Only children's chairs are stuffed with beans
II. All stuffed tigers are stuffed with beans
III. Stuffed monkeys are not stuffed with beans

A I only

B II only

C III only

D None of them is a fact

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Q 202

Statements : All fish are tortoise. No tortoise is a crocodile. Conclusions : I. No crocodile is a fish. II. No fish is a crocodile.

A Only conclusion II follows

B Either I or II follows

C Neither I nor II follows

D Both I and II follow

201

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Q 203

Statement: Large number of people living in the low-lying areas has been evacuated during the last few days to safer places. The government has rushed in relief supplies to the people living in the affected areas.

- A Statement I is the cause and statement II is its effect.
- B Statement II is the cause and statement I is its effect
- C Both the statements I and II are independent causes
- D Both the statements I and II are effects of some common cause

202

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Q 204

Statement The Management of School M has decided to give free breakfast from next academic year to all the students in its primary section through its canteen even though they will not get any government grant. Courses of Action (I) The school will have to admit many poor students who will seek admission for the next academic year. (II) The canteen facilities and utensils have to be checked and new purchases to be made to equip it properly. (III) Funds will have to be raised to support the scheme for years to come.

A Only II and III follows

B Only III and I follow

C Only I and II follow

D Only I follows

203

SKIPPED QUESTIONS

Q 205

The yard is to inch as quart is to

A

Gallon

B

Bounce

C

Milk

D

Liquid

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Q 206

Statement Should admission to the professional degrees in Pakistan be given only on merit without any concession to any particular group of students? Arguments (I) Yes. This will improve the quality of the professional institutes and degrees as they will be able to complete the degree successfully. (II) No. This will keep a large number of socially and economically backward students out of the reach of professional institutes and degrees.

- A If argument I is strong
- B If only argument II is strong
- C If both I and II are strong.
- D If neither I nor II is strong

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Q 207

Statement The availability of imported fruits has increased in the indigenous market and so the demand for indigenous fruits has been decreased. I. To help the indigenous producers of fruits, the Government should impose high import duty on these fruits, even if these are not of good quality. II. The fruit vendors should stop selling imported fruits. So that the demand for indigenous fruits would be increased.

A Both of them follows

B None of them follows

C Only I follows

D Only II follows

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Q 208

Four friends in the fifth grade were sharing a pizza. They decided that the oldest friend would get the extra piece. Zara is two months older than Mohib, who is three months younger than kiran. Minal is one month older than Mohib. Who should get the extra piece of pizza?

A Zara

B Mohib

C Kiran

D Minal

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Q 209

Statement: There is increase in water level of all the water tanks supplying drinking water to the city during the last fortnight. Most of the trains were cancelled last week due to water logging on the tracks.

- A Statement I is the cause and statement II is its effect.
- B Statement II is the cause and statement I is its effect
- C Both the statements I and II are independent causes
- D Both the statements I and II are effects of some common cause

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Q 210

Look at this series 5.2, 4.8, 4.4, 4. What number should come next

A

3

B

3.3

C

3.5

D

3.6

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Submit



Q1

Work done by friction force is always

A

Negative

B

positive

C

zero

D

maybe positive, maybe negative

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Q2

The maximum velocity of SHM is a_0 the period of oscillation is

A

$$2\pi x_0/a_0$$

B

$$2\pi a_0/x_0$$

C

$$2\pi a_0 x_0$$

D

$$2\pi/a_0 x_0$$

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Q3

Electric power is

A

rate of electric work done per unit time

B

voltage per unit time

C

electric charge per unit time

D

current per unit time

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Q4

The magnetic force is simply a

A

reflecting force

B

deflecting force

C

restoring force

D

gravitational force

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Q5

Rate of change in displacement is known as:...

A

speed

B

velocity

C

acceleration

D

momentum

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Question 6/210

Q6

If a person is irradiated accidentally by high radiation what immediate effects would be seen?

A

skin burning

B

high blood pressure

C

fever

D

any of these

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Q7

According to First law of thermodynamics,

A

$$dQ = dW - dU$$

B

$$dQ = dU$$

C

$$dQ = dU + dW$$

D

$$dQ = dW$$

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Question 8/210

Q8

The speed of sound in air is approximately:

A

1500 m/s

B

5000 m/s

C

330 m/s

D

50 m/s

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Question 9/210

Q9

Which is not radioactive?

A

ozone

B

hydrogen

C

sodium

D

all of these

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Q10

Internal energy is _____ of path

A

independent

B

dependent

C

Highly dependent

D

Not enough information

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Q11

Resistance of a material always decreases if

A

Temperature of material is decreased

B

Temperature of material is increased

C

Number of free electrons available becomes more

D

None of the above is correct

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Q12

One proton beam enters in magnetic field of 10^{-4} T normally with specific charge 10^{11} C/kg and velocity of 10^7 m/s. What will be the radius of circle?

A

0.1 m

B

1 m

C

10 m

D

none of these



Q13

Radioactive material decays by simultaneous emission of two particles with respective half-lives 1620 and 810 years. What is the time, in years, after which one-fourth of the material remains?

A

2430 years

B

1080 years

C

3240 years

D

4260 years

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Q14

A block of mass 60 kg just slides over a horizontal distance of 0.9 m. if the coefficient of friction between their surfaces is 0.15 then work done against friction will be:

A

79.4J

B

97.54J

C

105.25J

D

81J



Q15

Michelson showed that the standard metre was equivalent to:.

A

1,553 wavelengths of red light

B

1,553 wavelengths of blue light

C

1,553,163.5 wavelengths of red light

D

1,553,163.5 wavelengths of blue light

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Q16

If two bodies have same temperature the rate of heat transfer between them is

A

infinite

B

zero

C

double the temperature

D

none of these

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Q17

The cosmic radiations are ____ energetic than gamma rays

A

highly

B

equally

C

less

D

none of these

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Q18

Which of this is constant in isothermal process?

A

total heat

B

work done

C

Entropy

D

Internal energy

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Q19

The bridge rectifier is preferred to an ordinary two diode full wave rectifier because

A

it needs much smaller transformer for the same output

B

no center tap required

C

less PIV rating per diode

D

All of the above



Q20

The turns ratio of transformer is 10, It means that;

A

$$I_s = 10 I_p$$

B

$$N_s = N_p / 10$$

C

$$N_s = 10 N_p$$

D

$$V_s = V_p / 10$$

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Q21

In Young's double slit experiment, fringe spacing increases if:

A

red light is used as compared to blue light

B

x-ray is used as compared to blue light

C

violet light is used as compared to blue light

D

ultraviolet light is used as compared to blue light



Q22

If we are moving with constant velocity frame then the inertial state is same as

A

rest frame

B

accelerating frame

C

non-inertial frame

D

All of these

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Q23

Which radiation passes through black body

A

alpha

B

gamma

C

beta

D

white

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Q24

Existence of photon was confirmed by:

A

Compton

B

De' broglie

C

Einstein

D

Max planck

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Q25

Electric potential difference can be defined as:...

A

$$\Delta V = \Delta U - q$$

B

$$\Delta V = \Delta U / q$$

C

$$\Delta V = \Delta U + q$$

D

$$\Delta V = \Delta U * q$$

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Q26

Step down transformer has _____ turns in secondary coil

A

more

B

less

C

equal

D

zero

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Q27

A motion with increasing velocity can be represented on displacement-time graph by:...

A

a horizontal line

B

a curve line with decreasing gradient

C

a straight line with constant gradient

D

a curve line with increasing gradient



Q28

Work done by the centripetal force on a body moving in circle is zero because

A

the body moves parallel to F

B

the body move opposite to F

C

the body move right angle to F

D

centripetal and centrifugal balance each other



Question 29/210

Q29

Wave nature and particle nature of photon is linked by :

A

Rest mass of photon

B

Wavelength of photon

C

Light speed

D

Momentum of photon

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Q30

If a half wave rectifier is used to convert 50Hz AC into DC, then the number of pulses present in rectifier voltage is

A

25

B

50

C

100

D

75

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Q31

The units of angular velocity are similar to

A

angular displacement

B

angular acceleration

C

angular frequency

D

none of these

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Q32

The units of Wien's constant is ____

A

m.k

B

m/k

C

k/m

D

none of these

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Q33

For a parallel plate capacitor, the energy density is:.....

A

$$\frac{1}{2} \epsilon \epsilon_0 E$$

B

$$\frac{1}{2} \epsilon \epsilon_0 E^2$$

C

$$\epsilon \epsilon_0 E$$

D

$$\epsilon \epsilon_0 E^2$$

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Q34

Polarization explains light is

A

electric in nature

B

magnetic in nature

C

both a & B

D

none of these

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Q35

When the nucleus of an unstable atom emits only gamma radiation, the nucleus must

A

gain energy

B

lose energy

C

lose protons

D

gain protons

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Q36

EMF stands for

A

Electromotive force

B

Electrical momentum force

C

Electric Magnetic force

D

None of them

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Q37

Work done in a isobaric process is given by

A

 PdT

B

 PdV

C

 VdP

D

 P^2dV [< Previous Question](#)[Next Question >](#)



Q38

A monochromatic light is incident on two slits and interference pattern is produced on screen at the distance L . Now one slit is covered, no light coming from it. What is the change in pattern on the screen?

A

the width of central maximum is decreased

B

the width of outer maximum is decreased

C

the intensity of central maximum will increase

D

less number of fringes will be observed



Q39

A radioactive decay rate of 3.7×10^{10} disintegrations per second defines the unit of measurement known as the

A

Curie

B

rutherford

C

rontgen

D

Rad



Q40

Find the magnetic flux through a 1000 turn solenoid of radius 10 cm and length equal to 30 cm and a current 3 A pass through it

A

 $0.4 \times 10^{-3} \text{ Wb}$

B

4000 Wb

C

0.4 Wb

D

4 Wb

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Q41

A first harmonic stationary sound wave is produced in the air of the cylinder, which is half filled with water. More water is added to the cylinder, now first harmonic stationary wave is produced with a different frequency. What is the change in frequency and the nature of displacement in air at the water surface?

A

nature of displacement = antinode change in frequency = decrease

B

nature of displacement = antinode change in frequency = increase

C

nature of displacement = node change in frequency = increase

D

nature of displacement = node change in frequency = decrease



Q42

If two particles collide with one anti particle the resultant will give

A

one particle, one anti particle

B

total annihilation

C

one antiparticle only

D

none of these

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Q43

A real transformer does not change

A

voltage level

B

current level

C

power level

D

frequency level

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Q44

A galvanometer acting as a voltmeter will have a coil with

A

a high resistance in parallel

B

a high resistance in series

C

a low resistance in parallel

D

a low resistance in series



Question 45/210

Q45

4000 Coulomb charges were passing from the wire for about 12 seconds. Estimate the current during this process?

A

333.3 ampere

B

333.33 volts

C

666.67 ampere

D

None of them

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Question 46/210

Q46

The ratio of mass of electron to neutron is

A

1

B

1200

C

1300

D

none of these

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Question 47/210

Q47

A block of mass 50 kg slide over a horizontal distance of 1 m , if the coefficient between the surfaces is 0.2 then work done against friction is

A

98 J

B

72 J

C

56 J

D

34 J

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Q48

If the velocity of particle is varying linearly with time then shape of $d-t$ curve would be

A

linear

B

quadratic

C

cubic

D

decreasing linearly



Q49

The angular speed for the daily rotation of Earth in rad s^{-1} is?

A

 2π

B

 π

C

 4π

D

 $7.3 \times 10^{-5} \text{ rad s}^{-1}$ [< Previous Question](#)[Next Question >](#)



Q50

Negative of potential gradient is equal to:...

A

electricity intensity

B

electric flux

C

magnetic intensity

D

magnetic flux

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Q51

In addition to active site, allosteric enzymes contain?

A

inhibitors

B

substrate

C

allosteric site

D

polypeptide chains

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Q52

The lock and key model of enzyme action was proposed by:

A

Louis Pasteur

B

Emil Fischer

C

Daniel Koshland

D

Urey Miller

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Q53

Smooth muscles, cardiac muscles and organs are regulated by which of the following?

A

Central nervous system

B

Parasympathetic nervous system

C

Sympathetic nervous system

D

Autonomic system



Q54

The outermost layer in a typical plant cell would be _____.

A

Primary cell wall

B

Secondary cell wall

C

Middle lamellae

D

Cell surface membrane

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Q55

Cellular organelles that interact with hydrogen peroxide are called?

A

Glyoxysomes

B

Lysosomes

C

Ribosomes

D

Peroxisomes

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Q56

The first group of invertebrates to have a closed circulatory system:

A

Nematodes

B

Platyhelminthes

C

Echinodermata

D

None of the above.

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Question 57/210

Q57

First Actions spectrum was obtained by using?

A

Algae

B

Fungi

C

Bacteria

D

Spirogyra

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Q58

The function of lymph node is to filter ----

A

Blood

B

Lymph

C

Semen

D

Amniotic fluid

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Q59

Peak voltage in the output of half wave rectifier is 10V so dc component of output voltage is

A

$10\sqrt{2}$

B

$10/\sqrt{2}$

C

$10/\pi$

D

10π

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Q60

For a half-wave rectifier having diode voltage V_D and supply input of V , the diode conducts for $\pi - 2\theta$, where θ is given by

A

$$\tan^{-1}(V_D/V)$$

B

$$\sin^{-1}(V_D/V)$$

C

$$\cos^{-1}(V_D/V)$$

D

$$\cot^{-1}(V_D/V)$$

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Q61

The shaft of a motor rotates at a constant angular speed of 360rev/min. Angle turned through in 1 sec in radian is?

A

 π

B

 3π

C

 6π

D

 12π [< Previous Question](#)[Next Question >](#)



Q62

Spinal cord is the part of the:

A

Peripheral nervous system

B

Central nervous system

C

Autonomic nervous system

D

None of these

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Question 63/210

Q63

ABO blood group system was discovered in:

A

1811

B

1801

C

1911

D

1901

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Question 64/210

Q64

Mumps and Measles are caused by which virus?

A

adenovirus

B

Pox virus

C

influenza Virus

D

paramyxoviruses

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Q65

In parthenocarpy which levels are high in ovaries?

A

gibberellins

B

cytokinins

C

auxins

D

all of these

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Q66

Population growth is checked by which of the following?

A

no competition

B

no polymorphism

C

polymorphism

D

competition



Q67

Which of the following has a chain-like arrangement?

A

Streptobacillus

B

Streptococci

C

both a and b

D

none of these

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Question 68/210

Q68

The pleural membranes cover which organ?

A

Kidney

B

Heart

C

Brain

D

Lungs

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Question 69/210

Q69

The mobility of integral proteins can be measured by physical state of which of the following?

A

amino acids

B

external phospholipids

C

membrane phospholipids

D

membrane appendages

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Question 70/210

Q70

A group of interbreeding individuals belonging to a particular species and sharing a common geographic area is called?

A

community

B

family

C

race

D

population

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Question 71/210

Q71

Humans regulate their internal body temperature within a very narrow range. This is an example of?

A

homeostasis

B

evolution

C

genetics

D

metabolism

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Question 72/210

Q72

Study of fossils is called

A

mammalogy

B

palaeontology

C

herpetology

D

ornithology

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Question 73/210

Q73

Which tissue attaches the embryo to the wall of uterus?

A

Graafian follicle

B

Corpus luteum

C

Placenta

D

None of these

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Question 74/210

Q74

Fluid secreted by sertoli cells provides sperms with which of the following?

A

liquid medium

B

protection

C

nourishment

D

all of these

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Question 75/210

Q75

Which of the following scientists developed the vaccine for anthrax?

A

Edward Jenner

B

Leeuwenhoek

C

Alexander Fleming

D

Louis Pasteur

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Question 76/210

Q76

Animal cells are interconnected by which of the following?

A

plasma membrane

B

cell wall

C

desmosomes

D

plasmodesmata

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Question 77/210

Q77

What do the two peaks in the action spectrum represent?

A

absorption of light

B

carbon dioxide consumption

C

emission of light

D

both a and b

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Q78

The phage that causes the lytic cycle is called?

A

virulent phage

B

lytic phage

C

temperate phage

D

both a and b



Q79

When a muscle fibre shortens, the following also shortens:

A

actin filament

B

Sarcomere

C

Both A and B are correct

D

myosin

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Question 80/210

Q80

Where does the detoxification of harmful drugs occur?

A

RER

B

SER

C

Golgi

D

both a and b

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Q81

Dark bands of skeletal muscles are:

A

Z-band

B

A band

C

I band

D

H zone

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Question 82/210

Q82

Out of 31 pairs of spinal nerves, how many pairs of thoracic nerves are there?

A

8

B

10

C

12

D

15

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Q83

Reptiles are different from amphibians because:

A

They do not have an amniotic sac in their lungs.

B

They breathe through their lungs only.

C

They are cold-blooded.

D

They have a four-chambered heart.



Q84

If all members of a population are homozygous for the same allele, that allele is said to be?

A

Mobile in gene pool

B

Random in gene pool

C

Stationary in gene pool

D

Fixed in gene pool



Question 85/210

Q85

Inner membrane convolutions of the mitochondria is called?

A

grana

B

intergrana

C

thylakoid membrane

D

cristae

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Question 86/210

Q86

What enzyme is found in the thylakoid membrane that facilitates chemiosmosis?

A

ATP ligase

B

ATP kinase

C

ATP synthase

D

ATP dehydrogenase

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Question 87/210

Q87

Sensory areas that receive impulses from the skin are contained by which of the following?

A

frontal lobe

B

parietal lobe

C

occipital lobe

D

temporal lobe

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Q88

During inspiration, the diaphragm:

A

contracts

B

relaxes

C

contracts and relaxes

D

None of these

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Question 89/210

Q89

Mild wheezing, Fever, chills, and shortness of breath; all are symptoms of

A

emphysema

B

asthma

C

pneumonia

D

bronchitis

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Question 90/210

Q90

When HIV becomes AIDS?

A

when it attacks the T cells

B

when it replicates at maximum level

C

when it destroys the body cells

D

all of these

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Q91

A botanist sees that when he breeds a plants with blue flowers with a plant with red flowers, the resulting generation are plants that all have a 1 : 1 ratio of blue : red flowers. He knows that the two parents are homozygous for the trait of color. What phenomenon most likely explains the 1 : 1 ratio in the filial generation?

A Incomplete dominance

B Independent assortment

C Penetrance

D Codominance



Q92

Which type of reflex arc affects muscles?

A

autonomic reflex arc

B

somatic reflex arc

C

Both A and B

D

None of these

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Question 93/210

Q93

Excessive increase in temperature of medium causes the enzyme molecule to have which of the following changes?

A

activate

B

unaffected

C

denature

D

all of these

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Question 94/210

Q94

The cells that secrete testosterone

A

Nerve cells

B

fat cells

C

muscle cells

D

interstitial cells

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Question 95/210

Q95

Which of the following organisms have the greatest problem with photorespiration?

A

C4 plants

B

heterotrophs

C

C3 plants

D

CAM plants

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Question 96/210

Q96

White matter is primarily composed of:

A

axons

B

synapse

C

neuron somas

D

None of these

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Question 97/210

Q97

What type of viruses are the polioviruses?

A

DNA enveloped virus

B

RNA enveloped virus

C

dna naked virus

D

rna naked virus

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Q98

In the nucleus the ssDNA virus genome is converted to dsDNA by _____

A

DNA polymerase

B

RNA polymerase

C

Cell enzymes

D

viral proteins

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Q99

Recombination frequency between two linked genes can be calculated by which of the following?

A

test cross

B

normal cross

C

f1 cross

D

back cross



Q100

The scrotum is responsible for which of the following in the male reproductive system?

A

Synthesis of sperm

B

Lubrication

C

Nourishment of sperm

D

Temperature regulation

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Q101

All of the following are inflammatory arthritis except:

A

Rheumatoid Arthritis

B

Osteoarthritis

C

Gouty arthritis

D

Osteomyelitis

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Q102

A difference between eukaryotic and prokaryotic cells is in having which of the following?

A

ribosomes

B

cell wall

C

nuclear membrane

D

all of these



Q103

In mammals, which type of phenotypic expression will show recessive traits more frequently in males than females?

A

Incomplete dominance

B

Complete dominance

C

codominance

D

X-linked



Q104

Which one the following fatty acid is more soluble in an organic solvent and has higher melting point?

A acetic acid

B oleic acid

C palmitic acid

D all of these

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Q105

Periplaneta belongs to which phylum?

A

Mollusca

B

Annelida

C

Echinodermata

D

Arthropoda

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Question 106/210

Q106

During lytic cycle how many phages are released from infected host cell?

A

100-300

B

100-500

C

100-200

D

100-400

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Q107

Fertilization of human egg occurs in:

A

ovary

B

uterus

C

oviduct (fallopian tube)

D

cervix

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Q108

Which brain part is responsible for our basic and primitive emotions?

A

Limbic system

B

Thalamus

C

hypothalamus

D

cerebrum

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Q109

A researcher has designed a new type of inhibitor that binds at the active site of an enzyme. What type of inhibition does this molecule display?

A

Uncompetitive inhibition

B

Noncompetitive inhibition

C

Competitive inhibition

D

all of these



Q110

Phosphofructokinases enzyme converts fructose-6-phosphate into____

A

fructose-1,4-phosphate

B

fructose-1,6-bisphosphate

C

bisphosphate

D

fructose

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Q111

Who proposed starch sugar hypothesis?

A

Sager

B

Dixon

C

Mohi

D

Drebs

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Q112

The process that does not occur during expiration is:

A

intercostal muscles are relaxed

B

ribs are relaxed

C

muscles of diaphragm are relaxed

D

Lungs are relaxed



Q113

The phage components begin to assemble into mature phages only after the synthesis of?

A

structural protein

B

nucleic acid

C

both a and b

D

amino acids

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Q114

The end product of an enzymatic reaction inhibits formation of product in an earlier step. This type of enzymatic regulation is known as ?

A

allosteric regulation

B

negative regulation

C

metabolic pathway loop

D

feedback inhibition



Q115

Which of the following properties does not belong to Gases?

A

Indefinite volume

B

Indefinite shape

C

Low density

D

Strong interactions

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Question 116/210

Q116

The temperature at which vapor pressure of a liquid becomes equal to external pressure or atmospheric pressure is called as ?

A

Melting point

B

Boiling point

C

Freezing point

D

Sublimation point

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Q117

Which of the following element can form interstitial alloy with transition elements?

A

Zn

B

Mg

C

H

D

All of these

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Q118

In Ion Electron Method of Balancing, equations are

A

Written with Oxidation numbers of Constituents

B

Split into two half reactions

C

only oxidation part is written

D

Only Reducing part is written



Q119

How many pi bonds are present in ethene?

A

3

B

2

C

1

D

0

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Q120

Empirical formula and molecular formula of covalent molecule is

A

different

B

same

C

variable

D

equal

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Q121

In the rate equation $R=k[A]^a[B]^b$, a and b as exponents decides

A

Direction of reaction

B

Extent of Reaction

C

Order of Reaction

D

Temperature of Reaction

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Q122

A _ bond may be polar or nonpolar

A

Ionic bond

B

covalent bond

C

metallic bond

D

co-ordinate bond

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Q123

$\text{S}_{\text{N}}1$ reactions are favored by which of the following reactions?

A

Water

B

Benzene

C

Carbon Tetrachloride

D

Carbon disulphide

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Question 124/210

Q124

Ethanol is used as

A

a drink

B

a fuel

C

a preservative

D

all of above

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Q125

$\text{S}_{\text{N}}1$ reactions have which of the following species formed and consumed in the reaction?

A

Transition state

B

Intermediate

C

Carbanion

D

Carbene

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Q126

Which of the following conditions must be possessed by a compound to have geometrical isomerism?

A

Double bond

B

Different groups attach to same carbon of double bond and a double bond

C

Terminal double bond

D

Same groups attach to carbon atom of double bond

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Question 127/210

Q127

The half-life of Uranium is

A

700 Million years

B

706 Million years

C

89 days

D

710 million year

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Q128

During benedict's solution test Brick red precipitates are formed due to formation of ____?

A

 CuO

B

 RCOONa

C

 Cu_2O

D

 Cu(OH)_2 [< Previous Question](#)[Next Question >](#)



Q129

$\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ is an example of crystal system

A

triclinic

B

tetragonal

C

cubic

D

rhombohedral

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Q130

The existence of matter in our surrounding in different states is due to the difference of

A

repulsive force

B

interacting force

C

creative force

D

none of these



Q131

On heating egg albumin_____?

A

Solubilize

B

Decompose

C

Over cook

D

Coagulate



Q132

Which of the following forces are developed only for few moments ?

A

Dipole dipole forces

B

Debye forces

C

London dispersion forces

D

H-bonding

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Q133

Ionic Salts of Group 1 elements can conduct Electricity when they are in ____?

A

Solid form

B

Molten form

C

Aqueous form

D

Both b and c

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Q134

The correct electronic configuration of Cr is

A

 $[\text{Ar}]4s^23d^4$

B

 $[\text{Ar}] 4s^23d^4$

C

 $[\text{Ar}]4s^3d^5$

D

 $[\text{Ar}]4s^13d^5$ [< Previous Question](#)[Next Question >](#)



Q135

Homocyclic compounds are also called as _____?

A

Heterocyclic compounds

B

Alicyclic Compounds

C

Aliphatic compounds

D

Carbocyclic compounds

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Q136

In a voltaic cell ,two half cells actually separates

A

Two electrolytes

B

Anode and Cathode

C

Oxidation Half cell and Reduction half Cell

D

All of these



Q137

When an atom shares more than one electrons, the bond formed is

A

single bond

B

double bond

C

triple bond

D

both B & C



Q138

K_c and K_p have the same value when reactants and products have same number of

A

Atoms

B

Molecules

C

Ions

D

Moles

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Q139

Which inert gas is mixed with oxygen gas by deep sea divers to adjust the partial pressure of oxygen gas

A

Neon

B

Helium

C

Argon

D

Krypton

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Question 140/210

Q140

In which of the following body part protein is not present ?

A

Skin

B

Hair

C

Nails

D

Bones

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Q141

In Lucas test, tertiary alcohols form oily layer of alkyl halide _____?

A

On heating

B

Immediately

C

After 5-10 minutes

D

After 20 minutes



Q142

Which of the following is most soluble in water ?

A

Ethanoic acid

B

Pentanoic acid

C

Hexanoic acid

D

Butanoic acid

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Q143

Which one of the following is a strong electrophile on which benzene electrons attack fastly?

A

 FeBr_3

B

 FeCl_4^-

C

 Cl^+

D

 Cl^-



Q144

The species which donate two electron pairs in a coordination compound is called

A

Ligand

B

Monodentate ligand

C

Polydentate ligand

D

Bidentate ligand



Q145

The decrease in atomic radii is very prominent in

A

second group

B

second period

C

higher groups

D

higher periods

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Q146

Reduction of ketones produce_____?

A

Aldehydes

B

Methanol

C

Primary alcohols

D

Secondary alcohols

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Q147

Nitrogen N_2 has ____ number of electrons, protons and neutrons

A

7,8,9

B

7,7,7

C

14,14,14

D

14,14,15

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Q148

Glucose is converted into ethanol by the _____ enzyme present in yeast.

A

Invertase

B

Urease

C

Glycolysis

D

Zymase

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Q149

Greater the mass of gas taken, greater will be slope of straight line. Because greater the _____ greater will be volume occupied

A

pressure

B

temperature

C

number of moles

D

all of these

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Q150

What is the value of C-C bond length in benzene?

A

154 pm

B

120 pm

C

134 pm

D

139 pm

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Q151

Change in Pressure will only affect the substances which are in

A

Liquid state

B

Solid State

C

Plasma state

D

Gaseous State

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Q152

The second ionization energy value of magnesium ion after the removal of second electron is

A

135 KJ/mol

B

145 KJ/mol

C

155 KJ/mol

D

773 KJ/mol

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Q153

During the nomenclature of Alkyl halides, halogens are named as _____?

A

Substituents

B

Parent name

C

Ligand

D

Longest chain

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Q154

What is the correct equation to find Heat of neutralization using glass calorimeter ?

A

$$q = m s \Delta T$$

B

$$E = q m \Delta T$$

C

$$E = m s \Delta T$$

D

$$q = m c \Delta T$$

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Q155

Number of Electrons added on both sides of oxidation and reduction half reactions are balanced

A

At the start of procedure

B

Somewhere in the middle of balancing

C

After Adding two Half reactions

D

Before Adding two Half Reactions

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Q156

Hydrolysis of Tertiary Butyl bromide gives

A

Carboxylic Acid

B

Alcohol

C

Aldehyde

D

Ketone

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Q157

_____ conducts nerve impulse in brain

A

serotonin

B

aspartame

C

ascorbic acid

D

hydrazine

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Q158

Diamond is a bad conductor because of

A

high density

B

no free electron

C

tight structure

D

transparent to light

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Q159

Those elements in which d or f orbitals are in the process of completion are called

A

Transition elements

B

Typical transition elements

C

Outer transition elements

D

Inner transition elements

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Q160

Formation of Grignard reagent from alkyl halide and Mg metal takes place in _____?

A

Water

B

Alcohol

C

Anhydrous ether

D

Carbon tetrachloride

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Q161

During oxidation of unsymmetrical ketones which atom is oxidized?

A

Carbonyl carbon

B

Carbon attach to smaller number of hydrogen atom

C

Carbon attach to larger number of Hydrogen atoms

D

Hydrogen

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Q162

Dehydrogenase is example of which class of enzyme.

A

Oxidoreductase

B

Hydrolases

C

Ligases

D

Transferases

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Q163

Quantum number values for 2p orbitals are

A

 $n = 2, l = 1$

B

 $n = 1, l = 2$

C

 $n = 1, l =$

D

 $n = 2, l =$ [< Previous Question](#)[Next Question >](#)



Q164

Dalton's law of partial pressure is used to derive the relation between K_c and

A

Temperature

B

Universal Gas constant

C

Δn

D

K_p

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Q165

At Mount Everest what would be the boiling point of water?

A

100°C

B

69°C

C

98°C

D

102°C

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Q166

Which organic compound will form yellow crystals during iodoform test

A

phenols

B

acetone

C

ethanol

D

methanol

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Q167

The two pi bonds in ethyne molecule are:

A

Parallel to the sigma bond

B

At 19.5° to the sigma bond

C

At 45° to the sigma bond

D

Perpendicular to the sigma bond

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Q168

The elephant is _____ of the biggest land mammals.

A amongst

B single

C lone

D one

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Q169

I borrowed ____ pencil from your pile of pencils and pens.

A

a

B

an

C

the

D

no article

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Q170

Choose the correct sentence.

A

Samar bought an apple, an orange and an pear.

B

Samar bought an apple a orange and a pear.

C

Samar bought an apple, an orange and a pear.

D

Samar bought a apple, an orange and a pear.



Q171

When the dentist came in (A), my tooth was stopped aching (B)/ out of fear (C) that I might loose my tooth. (D)

A

When the dentist came in

B

my tooth was stopped aching

C

out of fear

D

that i might loose my tooth.

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Q172

What is your name?

A

Declarative

B

Imperative

C

Interrogative

D

Exclamatory

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Q173

Tweezers ____ always useful to handle small objects.

A

is

B

are

C

will

D

may

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Question 174/210

Q174

Please give me ____ cake that is on the counter.

A

a

B

an

C

the

D

no article

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Question 175/210

Q175

Most of the milk _____ gone bad. Six gallons of milk _____ still in the refrigerator.

A

has... are

B

have.. is

C

has.. is

D

have ... are

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Question 176/210

Q176

yearned

A

wished

B

dreamed

C

spurned

D

rejected

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Q177

Cats and dogs _____ not get along.

A

does

B

do

C

did

D

are

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Q178

The strong earthquake _____ (shake) the city causing lots of damage.

A

shake

B

shook

C

shaking

D

will shake



Q179

binnial

A

plant that blooms twice a year

B

occurring twice a year

C

composed or created by two people

D

occurring once every two years

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Q180

Choose the correct sentence.

A

I completed the homework for English, History, Math and Science only in the span of an hour.

B

I completed the homework for English History, Math, and Science only in the span of an hour!

C

I completed the homework for english, history, math, and science only in the span of an hour.

D

I completed the homework for English History Math and Science only in the span of an hour.

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Q181

Choose the correct spelling of the word

A

developement

B

devalopment

C

davalopment

D

development

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Question 182/210

Q182

The students cleaned up after they finished the experiment.

A

complex

B

simple

C

compound

D

None

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Q183

I advised her _____ drink it.

A

don't

B

not to

C

to not

D

to don't

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Question 184/210

Q184

Choose the correct spelling of the word

A

aniversary

B

anniversery

C

anniversary

D

aniversry

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Question 185/210

Q185

_____ man is mortal.

A

A

B

An

C

The

D

No article

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Q186

Choose the present indefinite tense form of the sentence. "He had been sleeping."

A

He has been sleeping.

B

He had slept.

C

He has slept.

D

He sleeps.



Q187

There ____ many difficulties regarding the situation.

A

should

B

was

C

were

D

is

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Q188

Fact 1: Most stuff toys are stuffed with beans
Fact 2: There are stuffed bears and stuffed tigers
Fact 3: Some chairs are stuffed with beans
If the above three statements are facts then which of the following statement will also be a fact
I. Only children's chairs are stuffed with beans
II. All stuffed tigers are stuffed with beans
III. Stuffed monkeys are not stuffed with beans

A I only

B II only

C III only

D None of them is a fact



Q189

Statements : All fish are tortoise. No tortoise is a crocodile. Conclusions : I. No crocodile is a fish. II. No fish is a crocodile.

A

Only conclusion II follows

B

Either I or II follows

C

Neither I nor II follows

D

Both I and II follow

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Q190

Statement: Large number of people living in the low-lying areas has been evacuated during the last few days to safer places. The government has rushed in relief supplies to the people living in the affected areas.

A

Statement I is the cause and statement II is its effect.

B

Statement II is the cause and statement I is its effect

C

Both the statements I and II are independent causes

D

Both the statements I and II are effects of some common cause



Q191

Statement The Management of School M has decided to give free breakfast from next academic year to all the students in its primary section through its canteen even though they will not get any government grant. Courses of Action (I) The school will have to admit many poor students who will seek admission for the next academic year. (II) The canteen facilities and utensils have to be checked and new purchases to be made to equip it properly. (III) Funds will have to be raised to support the scheme for years to come.

A

Only II and III follows

B

Only III and I follow

C

Only I and II follow

D

Only I follows



Question 192/210

Q192

The yard is to inch as quart is to

A

Gallon

B

Bounce

C

Milk

D

Liquid

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Q193

Statement Should admission to the professional degrees in Pakistan be given only on merit without any concession to any particular group of students? Arguments (I) Yes. This will improve the quality of the professional institutes and degrees as they will be able to complete the degree successfully. (II) No. This will keep a large number of socially and economically backward students out of the reach of professional institutes and degrees.

A

If argument I is strong

B

If only argument II is strong

C

If both I and II are strong.

D

If neither I nor II is strong



Q194

Statement The availability of imported fruits has increased in the indigenous market and so the demand for indigenous fruits has been decreased. I. To help the indigenous producers of fruits, the Government should impose high import duty on these fruits, even if these are not of good quality. II. The fruit vendors should stop selling imported fruits. So that the demand for indigenous fruits would be increased.

A

Both of them follows

B

None of them follows

C

Only I follows

D

Only II follows



Q195

Four friends in the fifth grade were sharing a pizza. They decided that the oldest friend would get the extra piece. Zara is two months older than Mohib, who is three months younger than kiran. Minal is one month older than Mohib. Who should get the extra piece of pizza?

A

Zara

B

Mohib

C

Kiran

D

Minal



Q196

Statement: There is increase in water level of all the water tanks supplying drinking water to the city during the last fortnight. Most of the trains were cancelled last week due to water logging on the tracks.

A

Statement I is the cause and statement II is its effect.

B

Statement II is the cause and statement I is its effect

C

Both the statements I and II are independent causes

D

Both the statements I and II are effects of some common cause



Q197

Look at this series 5.2, 4.8, 4.4, 4. What number should come next

A

3

B

3.3

C

3.5

D

3.6

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Q198

An ideal gas of N molecules are enclosed in a container at a constant pressure p . The graph between volume of gas and its absolute temperature is a straight line. What is the gradient of the graph?

A $\frac{NR}{p}$

B $\frac{NR}{p}$

C $\frac{Nk}{p}$

D Nkp

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Q199

A gardener move a lawn roller through a distance of 50 m. Applied force is 50 N inclined at 60 degree of direction of motion what will be the work done by the gardener

A

1250 J

B

2500 J

C

-1250 J

D

-2500 J



Q200

Gum swells up in the water because of:

A

Plasmolysis

B

Imbibitions

C

Turgidity

D

Endosmosis

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Q201

Choose the wrong statement from the following: For accurate measurements, a potentiometer wire_____

A

must have a uniform cross section

B

must have a high temperature coefficient of resistance

C

high specific resistance

D

homogeneity

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Q202

The number of models that represent enzyme-substrate model is?

A

1

B

2

C

3

D

4

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Question 203/210

Q203

Glycogen is how glucose is stored in the human body. Where is it most abundantly found?

A

Liver

B

Muscles

C

kidneys

D

both a and b

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Q204

Which of the following does NOT occur during skeletal muscle contraction:

A

ATP is hydrolyzed

B

Calcium binds to myosin heads

C

Both A and B

D

None of these



Q205

Which lytic enzyme released by the sperm?

A

trypsin

B

helicase

C

testosterone

D

Hyaluronidase

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Q206

What would be the resolving power of the objective length in a microscope if the eyepiece is 10X and total magnification is 40X?

A

4

B

10

C

40

D

400

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Q207

Each Kreb's cycle forms how many molecules of NADH?

A

3

B

2

C

4

D

1

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Q208

If two substituents are present at 1,4 positions then the isomer is called as _____?

A

Ortho

B

Meta

C

Para

D

None of these

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Q209

In secondary alkyl halides how many H atoms are attached to Carbon atom which is attached with halogen?

A 2

B 1

C 3

D 4

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Q210

Which of the following method is used to prepare alcohols from alkenes?

A

Reaction of alkenes with X_2 /water

B

Reaction of alkene with water

C

Reaction of alkene with H_2SO_4 /water

D

Reaction of alkene with Ni